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PRE-HIGH SCHOOL VOCATIONAL GROUP GUIDANCE FOR POTENTIAL DROPOUTS AND NON-COLLEGE-BOUND STUDENTS.

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THE PURPOSE OF THIS STUDY WAS TO DETERMINE THE EFFECTS OF SMALL GROUP GUIDANCE SESSIONS AND INDUSTRIAL TOURS ON AN EXPERIMENTAL GROUP OF MALE, EIGHTH GRADE STUDENTS DEEMED LACKING IN ACADEMIC INTEREST AND/OR ABILITY WHO WERE CLASSIFIED AS POTENTIAL DROPOUTS AND NON-COLLEGE-BOUND STUDENTS. IT WAS HOPED THAT THE EXPERIENCE WOULD MAKE THEM MORE COGNIZANT OF VOCATIONAL OPPORTUNITIES FOR QUALIFIED PERSONS, HELP THEM TO SELECT BETTER ACADEMIC PROGRAMS, INCREASE THEIR AWARENESS OF PERSONAL STRENGTHS AND WEAKNESSES, AND INCREASE THEIR AWARENESS OF THE RELATIONSHIP BETWEEN SCHOOL AND WORK. DATA FOR RESEARCH WERE GATHERED BY EXAMINING STUDENT GRADE POINT AVERAGES, CITIZENSHIP-GRADE AVERAGES, ATTENDANCE RECORDS, AND KUDER PREFERENCE RECORD (KPR) RESULTS. THE KPR WAS ADMINISTERED BOTH BEFORE AND AFTER THE TOURS TO THE EXPERIMENTAL GROUP AND A CONTROL GROUP. THE EXPERIMENT (1) DID NOT AUGMENT STUDENT AWARENESS OF THE IMPORTANCE OF ACADEMIC PURSUITS, (2) DID NOT MOTIVATE STUDENTS TO PERFORM SIGNIFICANTLY BETTER IN CITIZENSHIP OR IN CLASSROOM BEHAVIOR, (3) DID NOT SIGNIFICANTLY LOWER THE NUMBER OF UNEXCUSED ABSENCES, AND (4) DID NOT UNCOVER SIGNIFICANT INTEREST CHANGES. HOWEVER, STUDENTS DID ACHIEVE HIGHER POST-TEST RESULTS ON THE MECHANICAL AND SCIENTIFIC SCALES OF THE KPR. (PR)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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PRE-HIGH SCHOOL VOCATIONAL GROUP GUIDANCE FOR POTENTIAL DROPOUTS AND NON-COLLEGE-BOUND STUDENTS

by

John A. Yunker

Introduction

The purpose of this research project was to provide vocational guidance services to an experimental group of male eighth grade students who were deemed lacking in academic interest and/or ability and who were classified as potential dropouts and non-college-bound students. These services were to be provided through actual small group (i.e. 8-10 students) tours of industrial and business establishments and by subsequent small group guidance sessions in which these excursions and other occupational topics could be freely discussed.

The problem of this study was to ascertain if vocational business trips and small group guidance sessions could significantly effect alterations in an experimental student group's academic grade point average, citizenship grade point average, vocational interest areas and school attendance records. A matched control group of students was also selected for purposes of research comparison.

In conducting this research project the author attempted to answer the following questions:

1. Is it possible to raise a student's occupational knowledge and goals by the use of visitations to local business establishments?

2. Is it possible to assist the student in selecting occupational goals more commensurate with his abilities and interests?

3. Is it possible to improve the student's choice of high school courses through the use of occupational-vocational information?

4. Is it possible, through visiting businesses and weekly group guidance sessions, to improve the student's attitude towards school and its relation to his future.

5. Is it possible to reduce the number of students terminating their education prior to high school graduation through heightened insight into necessity of education as a result of added knowledge of occupations.

6. Is it possible to augment the occupational goals and aspirations of students from the lower socio-economic strata through a general exposure to the community's vocational-occupational opportunities.

A research project of this nature was deemed a significant endeavor for four general reasons. Initially it was hoped that through several distinctive primary contacts with the world of work a young man could become increasingly cognizant of the broad spectrum of vocational opportunities that await qualified persons. The U.S. Office of Education has pronounced that "one of the severest handicaps of deprived youth has been the dearth of relevent occupational data...". Hopefully through these business tours this handicap could be overcome or at least extenuated.

Secondly, this writer anticipated that a combination of trips and small group discussions would better prepare these students for the selection of courses from the curriculum upon high school matriculation. The counseling department at the school involved in this study had determined that a large percentage of these student made unwise curriculum selections and as a result experienced undue failures and

frustrations which often resulted in disenchantment with their curriculum specifically and school in general. Also by providing these students with a brief, but comprehensive, introduction to a diverse listing of vocational opportunities, the author hoped that curriculum selections, which could in actuallity be job requirements, might be considered much more carefully and in a different perspective.

A third objective of this study was to enable the participating students to increase their self-insight so that they might be better able to assess their own personal strengths and weaknesses. Involvement with these students has led this reseacher to the realization that far too many of these young men either have naive occupational aspirations that far exceed their abilities or are woefully oblivious to the educational demands and requirements needed to realize their lofty ambitions. Thus as a result of such obvious limitations they may ultimately be confused and frustrated upon their high school enrollment. Their program selections may be of little value to them and not in accordance with their abilities. Once again many will select what some refer to insiduously as "the easy way out" and that being termination. Consequently these individuals will be confronted with an obtuse and highly technical society in which they will be as dated and as welcome as a ravenous prehistoric tyrannosaur.

Finally as a result of a project of this design it is asserted that these students will be made more aware of the definite relationship between school achievement and the working world. Students must be attuned to the realization that a mathematics teacher's request to learn the metric system is not a sentence or a punishment. Indeed unless a student satisfactorily masters the metric scale he will be unable to

realize his wish to become a machinist. Admittedly the above is a gross example but if only these young men can learn that school assignments have a purpose other than "busy work" then perhaps education might assume a new meaning for them.

Limitations:

1. Perhaps the most severe limitation which influenced this study was the time restriction. Initially the project was to run the length of one semester or 4 and 1/2 months. However due to the late date of approval the project's duration was cut in half. The study was initiatied on March 14, 1967 and terminated on May 25, 1967. As a result, the time module between the pre and post-test dates was critically circumscribed. This author believes that the brevity of the time period could possibly have curtailed the amount of individual change that might have taken place over a longer research period.

2. Only one standardized instrument was utilized in the data gathering process and this was the Kuder Preference Record, Vocational Form C which has a ninth grade level norming scale. The vocabulary level of this instrument was found to be far too advanced for many of the students and this factor limited the number of valid test results. This writer elected not to administer any additional measuring inventories due to the dearth of time. However the California Methods Survey had been scheduled to be administered under the original design.

3. Time and an exceptionally damp spring also limited the number of business visitations made by the experimental group. During the regular spring term the eight groups toured six area businesses and industries. This number was considerably less than the eleven that had been originally scheduled. Thus the group's occupational orientation was not as complete or as varied as it could have been.

Definition of Terms:

1. Track II is a classification used to describe students who have been found to be average or below-average in academic performance, academic ability and academic motivation. Many students who fall into this category are also from the area's lower socio-economic strata.

2. Track IA is employed to classify average or above-average students who are capable of performing at an above-average academic pace. These students, however, fall below expectations due to a number of circumstances such as immaturity, the lack of self-confidence, motivation, and personal problems.

Hypotheses:

By design, this research project was intended to assess any variation in the academic standing, classroom behavior, vocational choice, attendance record, juncture of school termination and curriculum selection of an experimental group of male eighth grade students as compared with those of a matched control group of students. Although some data has already been gathered it will be virtually impossible to answer a great number of the questions posed in this study until the involved groups are scheduled to graduate from high school. Nevertheless in spite of the brief time span that the project consumed this writer, using the available data, attempted to empirically test the succeeding null hypotheses:

1. There is no difference between the experimental and control group's grade point averages as a result of the research project.

2. There is no difference between the experimental and control group's citizenship averages as a result of the research project.

3. There is no difference between the experimental and control group's number of unexcused absences as a result of the research project.

4. There is no difference between the experimental and control group's occupational interest areas as measured by the Kuder Preference Record as a result of the research project.

RELATED RESEARCH

In order to insure that a course in occupational and vocational information will be accepted as a neccessary and dynamic addition to the curriculum, one must clearly demonstrate that a vital need for it does exist in our schools. Unfortunately, indicating just such a need is far from being a prodigious task. Virtually scores of respected authorities in the fields of education, industry, journalism and the government services are keenly cognizant of this shortcoming and are currently engaged in the awesome task of informing the public of this critical need via numerous means and devices.

S. M. Miller, in The School Dropout states that:

> "We are increasingly living in a "credential society" where we do not evaluate people on the basis of performance but on the basis of credentials, ...This emphasis on formal education as the union card for jobs is unfortunate, for it...emphasizes, "sponsored" or "guided" mobility in which social acceptance of the aspirant is important".

Thus as a consequence, we today observe numerous tragic cases in which students have dropped from school not fully aware of the fact that their occupational future, despite their natural capabilities, will be severely curtailed because of that single but significant act.

Weiss and Reisman candidly feel that:

> The point at which a boy leaves the educational escalator is crucial in determining his future occupational opportunities. The boy who leaves high school before graduation is unlikely ever to do anything other than manual work, unless it be to take a fling at running a small business, like a gas station or a TV repair shop. (8:478)

> President Johnson in a 1964 policy paper on education declared that:

> One student out of every three now in the fifth grade will drop out before finishing high school--if we let him. Almost a million young people will withdraw from school each year--if we let them, and more than 100,000 of our smartest high school graduates each year will not go to college if we do nothing.

Unfortunately one must agree that dropouts are an American fact of life, but it seems utterly senseless for educators to accept this squandering of the nation's future as an immutable statistical verity.

Numerous situations vividly depict existing patterns where clearly too many students utilize fallacious, distorted and untenable criteria in the selection and establishment of their own particular vocational and occupational goals. The young men who shoulder the heaviest burden in these situations are those who lack the mental and financial resources to rectify their errors. Douvan and Adelson (2:473) found that out of a national sample of adolescent boys, the ones who expressed the bleakest hopes for upward mobility where the ones who were intellectually and emotionally unequipped to succeed. Furthermore the U.S. Office of Education in its "Guidelines for Divison of Adult and Vocational Research Program" insists that:

> One of the severest handicaps of deprived youth has been the dearth of relevent occupational data and methods for effective communication of such information. Lack of knowledge about how to shape career decision has all too often led to the selection and preparation of youth for inappropriate careers, particularly those who can least afford to make wrong commitments. (5:12)

David P. Ausubel has also discovered that:

> When adolescents are questioned about the necessary steps in preparation for the vocations they have chosen, about the duties and tasks involved, the remunerations they expect to

> receive and the job opportunities available, the replies in general are amazingly vague, naive and unrelated to the actual job selection. (1:455-57)

Ausubel definitely believes that there are several reasons for this rather discouraging phenomenon. One is that an enormous amount of pressure is being placed on students when they initially enter high school so that they will select the proper curriculum for their high school so that they will select the proper curriculum for their future vocation. Often times a student is "pressured into making a premature decision" and one can see that adolescents will undoubtedly err in many of their choices. (1:456) Also many students after finally making a decision, dislike or fear the prospect of returning to alter their schedules and in other cases sheer inertia, rather than vocational steadfastness, keeps students in a certain curriculum.

Ausubel continued by revealing that:

> The prospect of reaching a sound and well informed decision are not enhanced by the existence of countless numbers of jobs the requirements and relative attractiveness of which are constantly changing. Third, it is rarely possible for an adolescent to acquire any first-hand work experience in the occupation of his choice. (1:456)

It is also imperative that all information pertaining to vocations be kept as current and as dynamically interesting as humanly possible. Perhaps nothing in the world can wax more boring and uninspiring than an insipid class in occupations that has no relevant message for the class condemned to listen to it. Weiss and Riesman feel that:

> The procedures by which individuals prepare themselves for occupations have not caught up with the changing nature of the work force, so that the competence of those seeking jobs do not match the changing needs of industry. (8:476)

> The U. S. Dept. of Health, Education, and Welfare has also declared that:

> A major need is to identify current and anticipated areas of of occupational growth and unmet, urgent manpower requirements. At the present time the following areas deserve priority research attention: (a) identification of newly developing occupations requiring frequent re-examination of curricula; and (b) design or redesign of occupations based on a critical examination of a functional job field, or the job structure in a particular industry aimed, in part, at identifying and developing subprofessional and nonprofessional career roles and work responsibilities in fields with great potential for expansion. (9:10)

Another extremely important factor to be considered before implementing a course in occupational and vocational information is the student age level at which one should commence introducing this type of material. According to the U.S. Dept. of Health, Education and Welfare it has been declared that:

> For the individual, the career choice process involves similiar consideration of various possibilities, starting in childhood and extending over many years. Eventually, a choice is made that is more or less consistent with the self image. Opportunities for erroneous or distorted perceptions, both of self and of the true range and character of career prospects, appear almost unlimited. Penalties for unwise occupational and educational decisions often are high, particularly to the disadvantaged who may be most prone to make them. (9:4)

C. Gilbert Wrenn asserts that it is incumbent upon counselors and school administrators to prevent students from making serious mistakes in career choices and selection by striving to ascertain:

1. That students capable of high school graduation and beyond are identified early and individually motivated to continue to their optimum educational level;

2. That students easily discouraged in academic work are given as meaningful an educational experience as possible;

3. That potential dropouts for whatever reason in both elementary schools and high schools are prepared for vocational entrance;

4. That continuation education is provided for early school leavers who discover through experience their need for further part-time or full-time school work. (11:23)

Thompson has indicated that between the ages 13 and 15, a young person has the capacity to not only consider job requirements but to initiate exploratory missions into the world of work. She also notes that vocational guidance in the elementary school is a recent but important development in the area of vocational guidance activities. Eckerson and Smith have depicted this downward educational shift in the following matter. "Guidance in the elementary school assists all children ...in making maximum use of their abilities for their own development and for the good of society. It emphasizes the early recognition of intellectual, emotional, social and physical strengths and weaknessess the encouragement of talents the prevention of conditions which interfere with learning and the early use of available resources to meet the needs of children." (3:14)

Kaback believes that because many of the children in our elementary schools emerge from families where high school and college educations are not commonly earned, we as educators must help by guiding children toward the realization that they must "think and plan for the same kind of vocational levels that we take for granted among middle and upper class children". He goes on to add that "their poverty of experience must be replaced by multi-experience." (7:167)

Wellington and Alechowshil (10:160) were involved in a trial program involving third grade students in Chicago's Elementary Schools. The study was designed to encourage children to learn more about the

role and function of certain occupations presented to them through film strips.

The many results gained from the project clearly indicated that these children were able to:

1. Develop a more realistic understanding of the world of work.
2. Develop appreciation for different kinds of work.
3. Percieve that interest and abilities enter into an individuals choice of work.
4. Understand that occupations have advantages and disadvantages for the worker.
5. Gain a basic perception of the relationship of education to the world of work.
6. Develop study habits conducive to the development of work habits necessary for occupational success.

The aforementioned findings and statements indicate the fact that occupational and vocational information is definitely capable of fulfilling an urgent need in the education of both low ability students and those students who are from the lower economic strata in our society. One can also see evidence that students at an early age (i.e., third grade) can and do profit significantly from the teaching of occupational information. Ginsberg (4) has also said that we begin to make tentative occupational choices at age eleven and that an "occupational choice is a developmental process which typically takes place over a period of some ten years." It is therefore manifestly evident that occupational information can be effectively presented to young people, and most certainly the eighth grade student easily qualifies in this category.

Weiss and Reisman also acknowledge the fact that due to the shrinking demand for unskilled labor, farm labor and certain service trades in the world of work, "the specific work the father has done -- can only in a minority of cases furnish an example to his son." (8:478) Such a boy might be destined to leave school as a result of the lure of an apparently "good-paying" job. This conditioned striving toward the immediate gratification of economic needs can do irreparable harm to his future unless something is provided to augment the boy's exposure to the world of work. These authors also note that this boy is "more likely to view education as a set of arbitrary tasks imposed on him by an essentially arbitrary society rather than as an opportunity to prepare him for a gratifying adulthood." (8:478-79) Hence the school is the agency that must assume the responsibility of providing its students with opportunities to view and assess the choices available to them through their continuation in school. Hopefully these young people might even begin to perceive school as an asset which will enable them to reap a future economical and intellectual harvest instead of being shunted off as a present day liability. "For the working-class child the problem is first that the occupation system itself is so little understood: so little of its range is exposed to their view." (8:481)

In order to establish an academically sound program for the presentation of occupational and vocational information, one must decide on an effective and interesting method of presentation. It goes without saying that numerous programs of merit fail for want

of sound teaching techniques. The primary vehicle for the dissemination of occupational and vocational information in this course of study shall be small group plant and business tours climaxed by subsequent small group discussions.

Robert Hoppock states that (6:223) "the plant tour provides a painless way of getting students to absorb information about occupations other than ones they currently expect to enter--an important objective with students whose ambition exceeds their abilities." Hoppock proceeds to say that the plant tour "comes nearest to his definition of perfect teaching --a situation in which everyone learns, everyone enjoys learning." (6:223) The expressed purpose of a plant tour is to allow the student to "see, hear, feel and smell the environment in which work is done." This objective is in keeping with the idea that a person should be alerted to as many facets of an occupation as possible before choosing it as a career. One who has objectively scrutinized the pros and cons of an occupation before pronouncing his actual choice stands a much better chance of gaining satisfaction and achieving success than a person who has chosen his vocation through sheer serendipity.

RESEARCH METHODS

To obtain raw data for the research analysis this writer randomly selected fifty-three male eighth grade students from track IA and track II classes at a senior elementary school. These students were incorportated in the study's experimental group while a control group of young men was also selected using the methods outlined above.

The experimental and control groups were simultaneously administered the Kuder Preference Record as a pre-test on March 14, 1967 and as a post-test on May 25, 1967.

To effectively test the fourth hypothesis it was necessary to look for shifts in vocational interest patterns on the Kuder Preference Record. This task, however, could not be authentically performed unless the instruments investigated contained V scale results within the valid score range. Due to the fact that only twenty-one control students and twenty-four experimental members achieved valid results, this was not an easy assignment.

The author decided to match the twenty-one control pupils with twenty-one experimental students and to investigate any vocational interest-area differences between the groups. Thus it should be noted that the fourth hypothesis was evaluated on the basis of two groups of twenty-one students.

To further determine whether changes had actually taken place in a student's vocational interest areas, each pupil's Kuder was investigated to detect any score differences that occurred between

pre and post-administration dates. The author felt that if a differential of at least ten points was evident then this would indicate a change in interest not caused by chance alone. Thus a ten point score differential was adopted as one criterion of vocational interest change.

Further research data was garnered from each student's grade-point average (GPA), citizenship-grade-point average(CGA) and attendance records. These figures were then compiled for both the academic term during which the project was in progress and the term immediately preceeding the study's inception. The author then subjected the findings to statistical tests which shall be further delineated in the results section of this report.

To transform the student's grade-point averages (GPA) into data which could be studied statistically, a numerical equivalent to letter grades had to be developed. The author chose to utilize an eleven point scale which appeared to be expedient, comprehensive and viable. The actual numerical breakdown used in the study was the following: A, 11: A-, 10; B+, 9; B, 8; B-, 7; C+, 6; C,5; C-, 4; D+,3; D, 2; D, 2; D-, 1; and F, 0.

Furthermore a method also had to be devised if the citizenship grades were to be changed into usable data. Once again the author resorted to a numerical system analogous to the preceeding only using an eight point scale. The four grades used in recording citizenship averages were E (excellent), S (satisfactory), W (warning) and U (unsatisfactory) and the numerical equivalents

employed in this paper were: E,8; E-, 7; S+, 6; S,5; S-, 4; W+, 3; W, 3; W-, 1; and U, 0. Thus using the above two methods the letter grades were easily averaged for use in this study.

RESULTS

In investigating whether vocational field trips and group counseling could effect changes in a student's grade-point-average (GPA), the available information was examined statistically in two separate operations. The author initially compared the GPA's of students in both the experimental and control groups to determine how many had earned a higher GPA in the fourth grading period as compared to the preceeding grading period. In Table 1, using chi square as a statistical technique, it was evidenced that an equal number of students improved their GPA during the fourth quarter. However, it was also noted that forty-one experimental students and forty-two control students failed to improve their GPAs.

TABLE 1. ALL STUDENTS EITHER IMPROVING OR NOT IMPROVING THEIR GPA.

	Students Who Improved GPA		Students Who Did Not Improve GPA		
	fo	fe	fo	fe	Total
Experimental group	12	12	41	41	53
Control group	12	12	42	42	54
Total	24 (22%)		83 (78%)		107

After calculating the figures in Table 1 the results revealed that x^2 equaled .054. After referring this figure to a x^2 table this value was found not to be significant at the .10 level.

The second operation involved a similiar chi square approach comparing both groups on the basis of grades earned during the fourth quarter as opposed to grades received during the third quarter. Table 2 reveals that twenty-five experimental students lowered their GPA's while twenty-eight did not receive a lower average. Eighteen control group members attained a lower GPA, but thirty-six individuals managed to either improve or stabilize their averages.

TABLE 2. STUDENTS EITHER LOWERING OR NOT LOWERING THEIR GPA

	Students Who Lowered GPA		Students who did Not Lower GPA		Total
	fo	fe	fo	fe	Total
Experimental group	25	21	28	32	53
Control group	18	22	36	32	54
Total	43 (40%)		64 (60%)		107

The findings gleaned from Table 2 exhibit a x^2 value of 1.905 which, although being a great deal higher than that found in Table 1, was still not substantial enough to reign significantly at the .10 level on the x^2 table. Thus the resultant figures from the two preceeding tables seem to adequately support the first null hypothesis which states that no difference in GPA exists between the

two groups involved in this study.

For purposes of challenging the second hypothesis this writer elected to examine the citizenship grade averages (CGA) to determine whether there was any positive or negative fluctuations between the third and fourth grading periods. Once again all of the students CGA's in both groups were gathered and two chi square operations were utilized to assess the validity of the hypotheisis.

Table 3 denotes the number of students who had either improved or failed to improve their CGAs. The experimental group included eighteen who improved and thirty-five who did not improve their averages. Thirty-seven control group members failed to boost their CGAs while seventeen students did realize improvements.

TABLE 3. STUDENTS WHO EITHER IMPROVED OR DID NOT IMPROVE THEIR CITIZENSHIP GRADE AVERAGES

	Students Who Improved CGA		Students Who Did Not Improve CGA		
	fo	fe	fo	fe	Total
Experimental group	18	17	35	36	36
Control group	17	18	37	36	54
Total	35 (33%)		72 (67%)		107

The results gained from Table 3 disclosed a x^2 value of .043 which is not significant at the .10 level. Thus the findings tend to support

the second null hypothesis.

In examining the second operation pertaining to hypothesis number two the author continued to employ chi square as a statistical technique. In this example an attempt was made to ascertain whether a significantly larger group of students in the control group lowered their CGAs during the fourth grading period as opposed to the controls. From Table 4 one can note that ten experimental members and nine controls suffered lower CGAs during the fourth grading period. On the positive side forty-three experiemental students and forty-five control group members did not lower their averages.

TABLE 4. STUDENTS WHO EITHER LOWERED OR DID NOT LOWER THEIR CITIZENSHIP GRADE AVERAGES

	Students Who Attained Lower CGAs		Students Who Did Not Lower CGAs		Total
	fo	fe	fo	fe	
Experimental group	10	10	43	43	53
Control group	9	10	45	44	54
Total	19 (18%)		88 (82%)		107

Once again this operation yielded a chi square which was far beneath the .10 significance level (i.e. .062). Thus the second null hypothesis appears to be definitely upheld by the available data. Consequently this vocational research project apparently induced no

differences in CGAs between the experimental and control groups.

Table 5 contains information in reference to the third null hypothesis. For purposes of research this writer studied each participating pupil's attendance records to determine if any significant change had taken place in the number of recorded unexcused absences during the fourth quarter. Because of the assumption that this project would engender an increased level of school appreciation in each student, it was believed that this phenomenon would be manifested in a decreased number of unexcused absences in the experimental sample.

Recorded below one can observe that the number of unexcused absences was reduced from twenty-eight and one-half during the third quarter to eighteen and one-half throughout the fourth quarter. However, the members of the control group also recorded a decrease of six and one-half absences over the fourth quarter.

TABLE 5. A COMPARISON OF THIRD AND FOURTH QUARTER UNEXCUSED ABSENCES

	Third Quarter Unexcused Absences		Fourth Quarter Unexcused Absences		Total
	fo	fe	fo	fe	
Experimental group	28.5	27	18.5	20	47
Control group	32.5	34	26.5	25	59
	61.0 (57.5%)		45.0 (42.5%)		106

The results of this statistical analysis disclosed a x^2 value of .352 and this was found not to be significant at .10 level. Thus the findings from the above Table allows one to conclude that at this juncture the third null hypothesis has been supported. No significant difference in the number of unexcused absences existed between the two groups.

In the research methods section of this paper the author recorded that the Kuder was administered to both experimental and control groups simultaneously. To further elucidate the testing situation it should be noted that none of the students were actually cognizant of true reason for performing this task. As a result of these ambiguous circumstances and the length of time involved many of the students did not complete the instrument in a conscientious manner. Consequently a large number of the group members received invalid scores on the Kuder's V scale.

Because of the above factors it was theorized that if pupils actually developed renewed interest in their educational and vocational future this might be evidenced in an increased number of valid Kuder Preference Records after the second testing date. The author used chi square to explore this assumption and Table 6 displays how this endeavor was actually conducted.

TABLE 6. A COMPARISON OF POST-TEST VALIDITY RESULTS IN BOTH EXPERIMENTAL AND CONTROL GROUPS

	Valid Results		Invalid Results		
	fo	fe	fo	fe	Total
Post-Test (Experimental)	35	32	18	21	50
Post-Test (Control	29	32.5	25	21.5	54
Total	64(60%)		43 (40%)		107

The results gleaned from Table 6 failed to yield a x^2 value that was significant at the .10 level. Consequently if renewed interest was actually gained by the experimental sample it was not empirically assessed in the aforementioned operation.

To evaluate and verify the fourth null hypothesis three statistical techniques were employed. Initially this writer arbitrarily proposed to investigate each of the Kuder's ten interest areas to record the precise number of ten-point differentials in scores that existed between the pre and post-test results. After the changes were compiled the author used the chi square statistical method to attempt to discern if any significant differences in the amount of ten point changes existed between the experimental and control groups. It should be noted at this point that the author used the two groups of twenty-one students which were explained previously in the methods sub-section of this paper.

Table 7 illustrates that out of seventy-one total ten-point score variations, the control group realized thirty and the experimental group experienced forty-one.

TABLE 7. THE DIFFERENCE IN TEN POINT INTEREST-AREA SCORE DIFFERENTIALS BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS

	Control Group		Experimental Group		
	fo	fe	fo	fe	Total
Number of 10 pt. Score Changes in Each Kuder Interest Area 0	4	4.6	7	6.4	11
1	1	2.1	4	2.9	5
2	2	2.1	3	2.9	5
3	4	3.8	5	5.2	9
4	4	4.2	6	5.8	10
5	4	2.1	1	2.9	5
6	3	2.1	2	2.9	5
7	0	0.8	4	1.2	2
8	2	2.5	7	3.5	6
9	6	5.5		7.5	13
Total	30 (42%)		41 (58%)		71

The resultant findings from Table 7 tended to support the null hypothesis stating that no differences in interest areas exists between the groups. In spite of the fact that the x^2 value equaled 6.36 it was still short of the 14.684 needed to make it significant at the .10 level.

The second statistical technique employed in the evaluation of the fourth hypothesis was Karl Pearson's product-moment method. The variables used in the correlation were the pre and post-Kuder area-interest results for both groups. From this information a

correlation between both pre and post-Kuder scores was run for the experimental groups and the subsequent findings were compared with the control members pre and post-Kuder's correlation coefficients.

The coefficients resulting from these calculations are listed in Table 8. The experimental group's only interest areas not yielding a significant relationship at the .01 level were scale 2 and scale 6. The control group participants had four areas which were not significantly (i.e., .01) related and they were 2, 4, 6 and 9.

TABLE 8. A CORRELATION BETWEEN PRE AND POST-KUDER INTEREST-VALUES IN BOTH GROUPS USING PEARSON'S PRODUCT MOMENT METHOD

	Validity V	Outdoor 0	Mechanical 1	Computational 2	Scientific 3	Persuasive 4	Artistic 5	Literary 6	Musical 7	Social Services 8	Clerical 9
Experimental r	.25	.71*	.82*	.49	.59*	.58*	.58*	.45	.57*	.78*	.69*
Control r	.16	.57*	.64*	.23	.88*	.39	.62*	.52	.83*	.88*	.43

* Significant at 0.01.

The data displayed in the above Table tend to support the fourth null hypothesis stating that there is no significant differences in interest areas between groups as a result of this research project.

To refute the hypothesis one would have to show a fewer number of significant values in the experimental group. This phenomenon could indicate that more interest-area changes had taken place in the experimental participants.

The final statistical method selected to test the fourth null hypothesis was a comparison of means. The author averaged the scores earned by each student on every Kuder scale for both the pre-test and the post-test. This procedure involved the twenty-four experimental students and the twenty-one control group members who received valid Kuder results on both test dates.

Because so few students had actually qualified with valid V-scale results the author assumed that these two groups might no longer be matched. Thus the method of "comparing the means between independent groups" was utilized instead of the matched group method.

To evaluate the findings this writer initially compared all of the pre-test results to rule whether any differences existed in the scale means between experimental and control group. The next step was to compare the scale means of the post-tests to locate any differences between the groups. The subsequent results are depicted in the ensuing table.

TABLE 9. A COMPARISON OF KUDER SCALE MEANS BETWEEN THE EXPERIMENTAL AND CONTROL GROUP USING "DIFFERENCE BETWEEN MEANS OF INDEPENDENT GROUPS" METHOD

	Validity V	Outdoor 0	Mechanical 1	Computational 2	Scientific 3	Persuasive 4	Artistic 5	Literary 6	Musical 7	Social Service 8	Clerical 9
Pre-Test (Kuder)	NS	NS	S	NS	NS	NS	NS	NS	NS	NS	NS
Post-Test (Kuder)	NS	NS	S	NS	S	NS	NS	NS	NS	NS	NS

S- Significant difference at the .05 level
NS- No significant difference at the .05 level

From the above findings one can acknowledge that the pre-test yielded only one scale mean in which a significant difference between groups existed; while the post-test boasted mean differences in two scales. Although the mechanical scale mean-results were significantly different in the pre-test, the difference became more pronounced in the post-test. The post-test difference was significant at the .01 level of probability. Hence despite the group's pre-project differences in the mechanical interest area these differences grew even more extreme after the study.

Secondly, while the scientific scale showed no differences in pre-test results; the post-test findings revealed a different story. In scale three the results computed for the post-test findings showed a significant difference between groups at the .05 level of probability.

In spite of the fact that the fourth null hypothesis had been heretofore supported, these results tend to partially refute or challenge the previous disclosures. Thus the author submits that on the basis of the differences between the scale means, the fourth hypothesis did not gain complete support.

CONCLUSIONS

The primary purpose of this study was to ascertain what effects a vocational program of small group guidance sessions and industrial tours would have upon an experimental group of male, eighth-grade students. Data for research were gathered by examining student grade point averages, citizenship-grade averages, attendance records and Kuder Preference Record results. Although the project was conducted for only a brief duration of time (i.e., March 14, 1967 to May 25, 1967) the major conclusions were:

1. The experimental group of students did not differ significantly from the control group members in grade-point-averages as a result of the project. Hence the belief that vocational exposure and group counseling could augment a student's realization of the importance of academic pursuits was not manifested by the experimental group in this study.

2. The author also found that the experimental students did not perform significantly better than the control group in the area of citizenship or classroom behavior. Initially it was hypothesized that this project would instill, in the students, a feeling of greater school involvement and thus would enable them to accept school in a more positive manner. However, this researcher failed to locate any positive findings as expressed in the experimental group's citizenship grades.

3. The experimental group also did not have a significantly lower number of unexcused absences than did the control group. Here again the idea that more school involvement would lead to more regular attendance patterns was not substantiated by the research findings.

4. The study precipitated conflicting results in regards to the question of whether the project could effect significant differences in the vocational interest areas of the students as assessed by the Kuder. Using chi square the author could not detect significantly greater numbers of ten point interest scale changes in the experimental group over the control group. The author also failed to uncover any evidence to refute the fourth null hypothesis when Pearson's product-moment method was applied to check the correlation between each group's pre and post-Kuder's interest-scale results.

However, when the scales were checked for mean differences some contradictory evidence was noted. The students in the experimental group achieved significantly higher post-test results on the mechanical and scientific scales. The author believes that these changes might have resulted from the fact that nearly all of the businesses toured had strong and extensive mechanical departments and stressed the acute need for additional personnel. Also a large number of the plant managers and employees stressed the increasing role that science and technology is playing in industry.

Nevertheless the preceeding evidence was not sufficient enough to completely refute the fourth hypothesis. This writer, however, strongly recommends this area for additional and intensive research in future projects of this nature.

A Critique of The Summer Program

Although this study was designed to give primary emphasis to that portion of the project which encompassed the second semester of the academic year; a summer project was also instituted under similiar guidelines. Thus the author felt that a brief, but succinct, summary of the summer program should be included in this report.

The author suggested that all students interested in participating in tours conducted during the summer months should attend a meeting held during the last week of the academic year. Approximately forty boys were in attendance and thirty-seven (i.e., 69% of the original sample) chose to participate in the program.

This response was deemed satisfactory by the author although the original estimate had been higher. However, in light of the many conflicting factors during the summer such as sports, summer school, summer employment, vacations and a general aversion, on the part of some, towards school this number was encouraging.

The author selected seven tour sites considered by the students to be attractive, interesting and stimulating. Great care was also exercised in the selection so as not to present these boys with an overly glamorized indoctrination. Instead the purpose was to present the pupils with a realistic and cross-sectional picture of the world of work. The industrial and business plants visited were:

1. Owens-Illinois Glass Conainer Division Tracy, California
2. The Hayward Vocational Skills Center, Hayward, California
3. The Ford Mustang Assembling Plant, San Jose, California
4. The Stockton Record Newspaper, Stockton, California
5. Industrial Plant and Equipment Operations, Tracy Defense Depot, Rough and Ready Island, Stockton, California
6. H. J. Heinz Company, Tracy, California
7. Lawrence Radiation Laboratory, (Bevatron and Technical Labs.) Berkeley, California

It should be added that the Berkeley visitation served a dual purpose. Not only did it provide the boys with a fascinating preview of the energy source of the future, but it also enabled them to briefly tour the University of California Campus. This in itself was an experience that many of them spoke about for days afterwards. All in all that particular trip proved to be an educational experience par excellance for all of the group members.

The total number of students who attended all of the seven tours was one hundred and thirty-seven; or approximately twenty students per tour. Although the total was not astronomical in size it was not considered to be disappointing by several members of the staff due to the conflicting summer activities.

Regardless of these comments the author felt that the attendance should have been better. One strategy that might have been utilized to augment the attendance would have been to include the program as part of the summer school curriculum and offer high school credit to any students participating in the project. Thus attendance would have been mandatory for those attempting to garner high school credit. The author recommends that this arrangement be considered in future endeavors of this pattern.

Finally, although much more could be written about the project's effectiveness, its shortcomings and the amount of student involvement it commanded, this author would like to close by listing some comments registered by the students themselves. Each student was required to complete an evaluation form and was told to be as candid as possible in his criticisms. However it was gratifying to discover that not one negative statement was leveled against the program. Exhibited below are few of the more descriptive and colorful answers to the following question: Do you think that we should offer this program to the eighth grade students next year?

1. "Yes, because they should have the same privilege."
2. "Yes. This program has helped me to learn about different jobs. And it could help others to learn about different jobs too."
3. "Yes. It was fun and interesting."
4. "I think it was worth while. It probably helped most of our group to decide what they wanted to do.
5. "Yes. It will help them to learn to get all the education they can."
6. "Yes, it is very interesting and showed many job prospects."
7. "Yes. So they can be helped like I was."
8. "Yes. It helped us to learn what jobs were available in our area."

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